

Claims

We claim:

1. A multilayer polymeric film, said film comprising:
a first layer, said first layer comprising a polyamide;
5 a second layer, said second layer comprising an adhesive, said second layer disposed in contact with said first layer;
a third layer, said third layer comprising a polyamide, said third layer disposed in contact with said second layer;
a fourth layer, said fourth layer comprising an adhesive, said fourth layer disposed
10 in contact with said third layer;
a fifth layer, said fifth layer comprising a polyamide, said fifth layer disposed in contact with said fourth layer;
a sixth layer, said sixth layer comprising an adhesive, said sixth layer disposed in contact with said fifth layer; and
15 a seventh layer, said seventh layer comprising a polymer that may provide a heat-sealable and easily peelable layer, said seventh layer disposed in contact with said sixth layer.
2. The multilayer polymeric film of claim 1 wherein the seventh layer comprises a seal poisoning agent to allow a heat seal formed from the seventh layer to be easily
20 peelable.
3. The multilayer polymeric film of claim 1 wherein the seventh layer comprises a polymer selected from the group consisting of polybutylene, polypropylene and high density polyethylene.
4. The multilayer polymeric film of claim 1 wherein the seventh layer comprises a
25 blend of polymers wherein the blend comprises a polymer selected from the group consisting of polybutylene, polypropylene and high density polyethylene.
5. The multilayer polymeric film of claim 1 wherein the seventh layer comprises a blend of polymers wherein the blend comprises a first polymer selected from the group consisting of ethylene vinyl acetate copolymer or a polyethylene and further wherein the
30 blend comprises a second polymer selected from the group consisting of polybutylene, polypropylene, and high density polyethylene.

6. The multilayer polymeric film of claim 5 wherein the polyethylene comprises linear low density polyethylene.

7. The multilayer polymeric film of claim 1 wherein the total thickness of the film is between about 1.5 mils and about 8.0 mils.

5 8. The multilayer polymeric film of claim 1 wherein the second, fourth, and sixth layers comprise an anhydride modified polyethylene.

9. The multilayer polymeric film of claim 1 wherein the film is thermoformable.

10. The multilayer polymeric film of claim 1 wherein the first, third and fifth layers comprise nylon.

10 11. The multilayer polymeric film of claim 1 wherein the film does not contain a layer of EVOH.

12. A multilayer polymeric film, said film comprising:

a first layer, said first layer comprising a polyamide;

15 a second layer, said second layer comprising an adhesive polymer, said second layer disposed in contact with said first layer;

a third layer, said third layer comprising a polyamide, said third layer disposed in contact with said second layer;

a fourth layer, said fourth layer comprising an adhesive polymer, said fourth layer disposed in contact with said third layer;

20 a fifth layer, said fifth layer comprising a polyamide, said fifth layer disposed in contact with said fourth layer;

a sixth layer, said sixth layer comprising a blend of an adhesive polymer and a second polymer, said sixth layer disposed in contact with said fifth layer; and

25 a seventh layer, said seventh layer comprising a heat sealable polymer, said seventh layer disposed in contact with said sixth layer,

and further wherein said sixth layer easily delaminates from said seventh layer when said seventh layer is pulled from said sixth layer.

13. The multilayer polymeric film of claim 12 wherein the sixth layer comprises a seal-poisoning agent to allow the seal formed between the sixth and seventh layers to be easily
30 peelable when the seventh layer is pulled from the sixth layer.

14. The multilayer polymeric film of claim 12 wherein said first, third, and fifth layers comprise nylon.

15. The multilayer polymeric film of claim 12 wherein said second, fourth, and sixth layers comprise an anhydride modified polyethylene.

16. The multilayer polymeric film of claim 12 wherein said second polymer of the sixth layer is selected from the group consisting of polybutylene, polypropylene and high density polyethylene.

17. The multilayer polymeric film of claim 12 wherein said seventh layer comprises a heat sealable polymer selected from the group consisting of low density polyethylene, ethylene vinyl acetate, ethylene methyl acrylic acid, ethylene methyl acrylate, ethylene acrylic acid, ionomer, linear low density polyethylene, metallocene catalyzed polyethylene, medium density polyethylene, high density polyethylene, ultra low density polyethylene, and very low density polyethylene.

18. The multilayer polymeric film of claim 12 wherein the total thickness of the film is between about 1.5 mils and about 8.0 mils.

19. The multilayer polymeric film of claim 12 wherein the film does not contain a layer of EVOH.

20. A food package, said food package comprising:

a first multilayer polymeric film wherein said film comprises:

a first layer, said first layer comprising a polyamide;

a second layer, said second layer comprising an adhesive, said second layer disposed in contact with said first layer;

a third layer, said third layer comprising a polyamide, said third layer disposed in contact with said second layer;

a fourth layer, said fourth layer comprising an adhesive, said fourth layer disposed in contact with said third layer;

a fifth layer, said fifth layer comprising a polyamide, said fifth layer disposed in contact with said fourth layer;

a sixth layer, said sixth layer comprising an adhesive, said sixth layer disposed in contact with said fifth layer; and

a seventh layer, said seventh layer comprising a polymer such that the seventh layer may be sealable with the addition of heat, said seventh layer disposed in contact with said sixth layer; and

a second multilayer polymeric film, wherein said seventh layer of said first

5 multilayer polymeric film is heat sealed to said second multilayer polymeric film and further wherein the second multilayer polymeric film is easily peelable from the second multilayer polymeric film.

21. The food package of claim 20 wherein the seventh layer of the first multilayer film comprises a seal-poisoning agent to allow the seal formed between the seventh layer of the
10 first multilayer film and the second multilayer film to be easily peelable when the second multilayer film is pulled from the second multilayer film.

22. The food package of claim 20 wherein said first, third and fifth layers of said first multilayer polymeric film comprise nylon.

23. The food package of claim 20 wherein said seventh layer of said first multilayer
15 polymeric film comprises a polymer selected from the group consisting of polybutylene, polypropylene and high density polyethylene.

24. The food package of claim 20 wherein said seventh layer of said first multilayer polymeric film comprises a blend of polymers wherein a first polymer is selected from the group consisting of polyethylene polymer and polyethylene copolymers, and further
20 wherein a second polymer is selected from the group consisting of polybutylene, polypropylene and high density polyethylene.

25. The food package of claim 20 wherein said first polymer of said seventh layer is selected from the group consisting of low density polyethylene, linear low density polyethylene, single site catalyzed polyethylene, medium density polyethylene, high
25 density polyethylene, ultra low density polyethylene, very low density polyethylene, ethylene vinyl acetate copolymer, ethylene methyl acrylic acid copolymer, ethylene methyl acrylate copolymer, ethylene acrylic acid copolymer, and an ionomer.

26. The food package of claim 20 wherein said second multilayer polymeric film comprises:

30 a first layer, said first layer comprising a polyamide;

a second layer, said second layer comprising an adhesive, said second layer disposed in contact with said first layer;

a third layer, said third layer comprising a polyamide, said third layer disposed in contact with said second layer;

5 a fourth layer, said fourth layer comprising an adhesive, said fourth layer disposed in contact with said third layer;

a fifth layer, said fifth layer comprising a polyamide, said fifth layer disposed in contact with said fourth layer;

10 a sixth layer, said sixth layer comprising an adhesive, said sixth layer disposed in contact with said fifth layer; and

a seventh layer, said seventh layer comprising a heat sealable polymer, said seventh layer disposed in contact with said sixth layer,

wherein said multilayer polymeric film does not contain an EVOH core layer.

27. The food package of claim 26 wherein said seventh layer of said second multilayer polymeric film comprises a polymer such that said seventh layer of said multilayer polymeric film is easily peelable from the first multilayer polymeric film.

28. The food package of claim 27 wherein said seventh layer of said second multilayer polymeric film comprises a polymer selected from the group consisting of polybutylene, polypropylene and high density polyethylene.

29. The food package of claim 27 wherein said seventh layer of said second multilayer polymeric film comprises a blend of polymers wherein a first polymer is selected from the group consisting of polyethylene polymer and polyethylene copolymers, and further wherein a second polymer is selected from the group consisting of polybutylene, polypropylene and high density polyethylene.

30. The food package of claim 20 wherein said first multilayer polymeric film does not contain an EVOH layer.

31. A food package, said food package comprising:
a first multilayer polymeric film comprising:

a first layer, said first layer comprising a polyamide;

a second layer, said second layer comprising an adhesive polymer, said second layer disposed in contact with said first layer;

a third layer, said third layer comprising a polyamide, said third layer disposed in contact with said second layer;

a fourth layer, said fourth layer comprising an adhesive polymer, said fourth layer disposed in contact with said third layer;

5 a fifth layer, said fifth layer comprising a polyamide, said fifth layer disposed in contact with said fourth layer;

a sixth layer, said sixth layer comprising an blend of an adhesive polymer and a second polymer, said sixth layer disposed in contact with said fifth layer; and

10 a seventh layer, said seventh layer comprising a heat sealable polymer, said seventh layer disposed in contact with said sixth layer,

and further wherein said sixth layer easily delaminates from said seventh layer when said seventh layer is pulled from said sixth layer; and

a second multilayer polymeric film, wherein said seventh layer of said first multilayer polymeric film is heat sealed to said second multilayer polymeric film.

15 32. The multilayer polymeric film of claim 31 wherein the sixth layer of the first multilayer polymeric film comprises a seal-poisoning agent to allow the seal formed between the sixth and seventh layers of the first multilayer film to be easily peelable when the seventh layer is pulled from the sixth layer.

20 33. The food package of claim 31 wherein the first, third and fifth layers of said first multilayer polymeric film comprises nylon.

34. The food package of claim 31 wherein the second, fourth, and sixth layers of said first multilayer polymeric film comprise an anhydride modified polyethylene.

35. The food package of claim 31 wherein said seventh layer of said first multilayer polymeric film comprises a polyethylene copolymer.

25 36. The food package of claim 31 wherein said seventh layer of said first multilayer polymeric film comprises ethylene vinyl acetate copolymer.

37. The food package of claim 30 wherein said second multilayer polymeric film comprises:

a first layer, said first layer comprising a polyamide;

30 a second layer, said second layer comprising an adhesive, said second layer disposed in contact with said first layer;

a third layer, said third layer comprising a polyamide, said third layer disposed in contact with said second layer;

a fourth layer, said fourth layer comprising an adhesive, said fourth layer disposed in contact with said third layer;

5 a fifth layer, said fifth layer comprising a polyamide, said fifth layer disposed in contact with said fourth layer;

a sixth layer, said sixth layer comprising an adhesive, said sixth layer disposed in contact with said fifth layer; and

10 a seventh layer, said seventh layer being sealable via the application of heat, said seventh layer disposed in contact with said sixth layer,

wherein said second multilayer polymeric film does not contain an EVOH core layer.

38. The food package of claim 37 wherein said first, third, and fifth layers of said second multilayer polymeric film comprise nylon.

15 39. The food package of claim 37 wherein said second, fourth, and sixth layers comprise an anhydride modified polyethylene.

40. The food package of claim 30 wherein said first multilayer polymeric film structure does not contain EVOH.